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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,098	11/17/2003	Stefan Irmisch	245446US6	9789
22850	7590	06/06/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			JIMENEZ, MARC QUEMUEL	
			ART UNIT	PAPER NUMBER

3726

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/713,098

Applicant(s)

IRMISCH ET AL.

Examiner

Marc Jimenez

Art Unit

3726

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11172003
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-24-06 has been entered.

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The disclosure is objected to because of the following informalities: please remove references to the claims as recited on page 1, line 11 and page 2, line 29.

Appropriate correction is required.

*Claim Rejections - 35 USC § 112*

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 1-6** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specific limitation “without modifying steps of said pre-designed machining process” is considered new matter because there is no support in the original disclosure for this limitation in the claims. It is noted that the mere act of initially starting a machining apparatus or turning off a machining apparatus is considered a modifying step. Therefore, a pre-designed machining process would have to have a modifying step.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 1-6** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites “providing the turbine blade or vane in a casting mold” which is unclear. It is understood that the casting mold used to create the turbine blade or vane. As currently written it appears that the turbine blade or vane is previously made and then placed in a casting mold. Clarification is requested.

Claim 1 recites “without modifying steps of said pre-designed machining process”. This claim is vague and indefinite because it is unclear what “steps” are not being modified. The mere act of initially starting a machining apparatus or turning off a machining apparatus is considered a modifying step.

### *Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over David et al. (US5733080) in view of Wormley et al. (US5193314).

David et al. teach fixing workpiece **3** in a first position (figure 1), the first position corresponding to a predetermined position for the workpiece to be subjected to a pre-designed machining process (via **9**), rotating the workpiece **3** around a longitudinal axis **1** from the first position (figure 1) to a second position (figure 2), and subjecting the workpiece **3** in the second position (figure 2) to the pre-designed machining process (via **9**) without modifying the steps of

Art Unit: 3726

the pre-designed machining process. David et al. is considered to meet the limitation “without modifying the steps of the pre-designed machining process” because this limitation is broad enough to encompass not having to change the type of milling cutter 7 used. Also, in col. 3, lines 52-55, David et al. states that shaping remachinings could be eliminated which could be considered a machining process without modifying steps a pre-designed machining process (the process of machining the blade surface).

David et al. do not specifically teach that the turbine blade is provided as a casting.

However, Wormley et al. teach that among other techniques of making turbine blade blanks casting is a well known method (col. 1, line 25).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of David et al. with a casted turbine blade, in light of the teachings of Wormley et al., in order to create a close rough form of the turbine blade that can be easily machined.

Regarding claim 2, David et al. teach that the workpiece 3 is clearly held by a holder for rotation along 1. As shown in figures 1-3, the surfaces of the blade are machined, therefore changing the leading-edge angle of the turbine blade. There are inherently “reference points” for the machining process being repositioned.

Regarding claim 3, David et al. teach in col. 9, lines 64-66, that the machining could be done by digital controllers which inherently calculate distances.

Regarding claim 4, David et al. teach additional machining stock (see near reference line 5).

Regarding claim 5, David et al. do not specifically show a blade platform. However, in figure 5, Wormley et al. teach a blade platform 48. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of David et al. with a blade platform, in light of the teachings of Wormley et al., in order to provide an attachment means for the blade to be secured in a turbine. In view of David et al., it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have machined the platform, in order to create a smooth platform surface.

Regarding claim 6, David et al. do not specifically point out the amount of additional machining stock. However, at the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art, to have used the claimed additional machining stock thickness because applicant has not disclosed that the claimed machining stock thickness provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either the thicknesses taught by David et al. or the claimed thickness because either thickness perform the same function of providing a removable surface equally well. Alternatively, Wormley et al. teach that the minimum value for the additional machining stock is approximately 2 mm, and the additional machining stock above the minimum value amount to a total of about 5 mm. (See Col. 5, Line 49 to Col. 6, Line 13 and Figs. 5 & 8). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of David et al. with additional machining stock approximately 2 mm, and the additional machining stock above the minimum value amount to a total of about 5 mm, in light of the teachings of Wormley et al., in order to provide a suitable thickness that can be

Art Unit: 3726

modified.

*Response to Arguments*

9. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is (571) 272-4530. The examiner can normally be reached on Monday-Thursday.

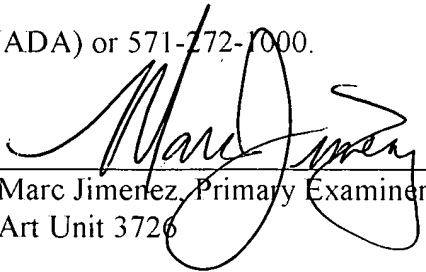
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated



Art Unit: 3726

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Marc Jimenez, Primary Examiner  
Art Unit 3726

MJ

5-23-06